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(84) Designated Contracting States: AT BE CH DE ES FR GB GR IT LI LU NL SE (1) Applicant: PLESSEY OVERSEAS LIMITED Vicarage Lane liftord Essex (GI 4AQ(GB)

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(54) Acoustic transducers.

An acoustic transducer, such as a headphone 2, comprises a housing with a vent 16 for venting fluid medium from the housing. The vent is dimensioned to ensure that laminar flow of the fluid medium through the vent 16 is maintained throughout the working range of the drive unit 14 of the transducer so that the amplitude response and phase response of the transducer are substantially invariant throughout the working range of the drive unit 14.

SAME SHAPE RESPONSE

LEVEL

A PRINTING RESPONSE

SAME SHAPE EFFECT OF VENT HOLES ON FREQUENCY RESPONSE

FIG. 1.

d 960 czc o

Croydon Printing Company Ltd.



## EUROPEAN SEARCH REPORT

Applicatio 'Cumber

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| Category   | Citation of document wi   | ISIDERED TO BE RELEV  |   |                             |                    |
|--|---|---|---|-----------------------------|--------------------|
|  | U. ICIEVAII   | c baccades  | Relevant<br>to claim  | CI.ASSIFICATION             | TON OF TH          |
| Y  | AT-A- 337 795 (<br>* Figures; page 2<br>*   | R. GÖRIKE)<br>, lines 19-44; claim 1                                    | 1   | H 04 R<br>H 04 R            | 1/22               |
| A  |   |   | 2,3   | 11 04 1                     | 1/10               |
| Υ  | VIIIO CADELOI   | STANDARD TELEPHONES<br>-74; figures; claim 1                            | 1   |                             |                    |
|  | *   | 74, ligures; claim 1  |   |                             |                    |
| Α  |   |   | 6   |                             |                    |
| A  | US-A-3 602 329 (F<br>* Figures; claims  | B. BAUER)   | 1,2,4,5   |                             |                    |
|  | US-A-4 071 717 (V<br>* Column 2, lines  | V. FIDI)<br>18-31; claims:  | 1-5,7-9   |                             |                    |
| ,  | figures *   | ,,  |   |                             |                    |
| A  | EP-A-0 064 553 (S<br>* Claims; figures  | ONY)  | 10  |                             |                    |
| A  | CH-A- 558 121 (H. PEIKER)<br>* Claims; figures *  |   | 1,6,11  | TECHNICAL F<br>SEARCHED (In | TELDS<br>or. Cl.4) |
|  |   |   |   | H 04 R                      |                    |
|  |   |   |   |                             |                    |
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|  | The present scarch report has t   | peen drawn up for all claims  | -   |                             |                    |
|  | Place of search   | Date of completion of the search  |   | Examiner                    |                    |
|  | HAGUE   | 11-07-1988  | MINNO   | E G.W.                      |                    |
| X : partice<br>Y : partice<br>docum<br>A : techno<br>O : non-w | TEGORY OF CITED DOCUME<br>ilarly relevant if taken alone<br>ilarly relevant if combined with an-<br>ent of the same category<br>logical background<br>ritten disclosure<br>collace document | E : earlier patent after the filing D : document cite L : document cite | ciple underlying the invidence of the comment, but publishes date | ention<br>d on, or          |                    |